



Values and Principles in the Antarctic Treaty and the Environmental Protocol: an Overview and Categorization

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Abstract

Values and principles are mentioned in numerous hard law and soft law instruments within the Antarctic Treaty System (ATS). However, no provision within any of the ATS instruments fully lists or describes them all. Moreover, their meaning is not elaborated upon or defined, and the relationships between values and principles are also not clearly stated. This paper aims to identify ATS values and principles by examining two hard law instruments: the Antarctic Treaty and the Protocol on Environmental Protection. Based on definitions of the concepts of ‘value’ and ‘principle’, the paper provides an overview of the values and principles included in these instruments and proposes a categorization. Through this examination, the authors aim to expand the comprehension and elucidation of the ATS values and principles while also stimulating further research on the topic. A more structural understanding and attention to the values and principles can prove fundamental in further shaping Antarctic governance and developing new regulatory instruments.

Keywords

values – principles – Antarctica – Antarctic Treaty – Environmental Protocol – Antarctic governance

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1 Introductory Remarks

This paper examines the values and principles enshrined in the Antarctic Treaty¹ and its Protocol on Environmental Protection.² This examination seeks to achieve a better understanding of the meaning of these values and principles in the Antarctic Treaty System (ATS)³ and how they relate to each other, intending to contribute to current and future policy and academic discussions on the functioning and development of the ATS.⁴

The values and principles are worthy of further examination, given that they are scattered throughout the system, and there is no single provision within any of the instruments of the ATS that exhaustively lists or describes them all. While the values and principles receive attention in many different hard and soft law instruments of the ATS, their meaning is not further explained or defined. Likewise, there is no guidance on the relationship between different values, between different principles, or between values and principles.

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- 1 Antarctic Treaty, signed on December 1, 1959, entered into force on June 23, 1961, 402 U.N.T.S. 71. Twelve States are original signatories of the Antarctic Treaty: the seven Antarctic claimant States (Argentina, Australia, Chile, France, New Zealand, Norway, and the United Kingdom), two States (USSR – since replaced by the Russian Federation – and the United States) that have reserved the right to make a claim, and three other States that had participated in scientific research during the 1957–1958 International Geophysical Year (Belgium, Japan and South Africa). At the time of writing, there were 56 Contracting Parties to the Antarctic Treaty (out of which 29 are Consultative Parties) and 42 Contracting Parties to the Environmental Protocol (see <https://www.ats.aq/devAS/Parties?lang=e>).
 - 2 The Protocol on Environmental Protection to the Antarctic Treaty (Protocol or Environmental Protocol), signed in Madrid on October 4, 1991, and entered into force on January 14, 1998, 2941 U.N.T.S.
 - 3 The term Antarctic Treaty System (ATS or System) is used to refer to the Antarctic Treaty, the measures in effect under the Treaty, its associated separate instruments in force and the measures in effect under the latter (see Article 1(e) of the Protocol). The separate associated instruments refer to: (i) the Convention for the Conservation of Antarctic Seals (CCAS), signed on June 1, 1972, entered into force on March 11, 1978, 1080 U.N.T.S. 175; (ii) the Convention for the Conservation of Antarctic Marine Living Resources (CAMLR Convention), signed on May 20, 1980, entered into force on April 7, 1982, 1329 U.N.T.S. 47; and (iii) the Protocol on Environmental Protection to the Antarctic Treaty. For a specific explanation of the instruments analyzed in this paper, see the final paragraph of introductory remarks discussing this paper's scope.
 - 4 These objectives are closely related to the research project financed by the Dutch Research Council (NWO) titled 'Proactive Management of Antarctic Tourism: Exploring the Role of ATS Values and Principles and Best Practices Beyond the ATS' (ProAct), in which the authors participate. The values and principles constitute a common theme of the four subprojects of ProAct.

Furthermore, agreement on what the main values and principles are and what role they should play is not evident.

The significance of principles and values in the ATS has been reflected in diverse instances. According to Article IX of the Treaty, representatives of the Contracting [Consultative] Parties shall meet at suitable intervals and places for “formulating and considering, and recommending to their Governments, measures in furtherance of the *principles* and *objectives* of the Treaty” (emphases added). Article X of the Treaty states that “Each of the Contracting Parties undertakes to exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any activity in Antarctica contrary to the *principles* or purposes of the present Treaty” (emphasis added).⁵ The Antarctic Treaty Consultative Parties (ATCPs)⁶ also conveyed the determination “to ensure full implementation of the *principles* and provisions of the Protocol and its Annexes to support comprehensive protection of the Antarctic environment and dependent and associated ecosystems” (emphasis added).⁷

In addition, the definition and articulation of ‘values’ and ‘principles’ have received substantial attention in the broader (non-polar) literature, for instance, legal literature. With many different views being expressed, general agreement on the meaning and role of ‘values’ and ‘principles’ in the literature is still lacking.

A vast body of research has explored ‘Antarctic values’. Values associated with Antarctica, for example, can shape human behavior and motivations concerning use and non-use, as well as decision-making regarding the management of human activities.⁸ Values have also been regarded as responsible for shaping the current regime, and “the Antarctic future will depend upon the

5 In a similar vein, see also, Article 13(2) of the Environmental Protocol.

6 Consultative Parties are parties with decision-making capacity within the ATS. There are 29 Consultative Parties, which include the 12 original signatories and 17 other Parties which have acquired such status pursuant to Article IX(2) of the Antarctic Treaty by having demonstrated their “interest in Antarctica by conducting substantial scientific research there, such as the establishment of a scientific station or the despatch of a scientific expedition”.

7 Santiago Declaration on the Twenty-Fifth Anniversary of the Signing of the Protocol on Environmental Protection to the Antarctic Treaty, Appendix 1 to Final Report of the Thirty-Ninth (39th) ATCM, Santiago, Chile, 23 May–1 June 2016, Volume 1 (Secretariat of the Antarctic Treaty).

8 Daniela Liggett, and Alan D. Hemmings, eds., *Exploring Antarctic Values* (Christchurch: Gateway Antarctica Special Publication, 2013), 7–8, available at <https://www.scar.org/library/science-4/social-sciences/hasseg/5392-ssag-proceedings-2011/>.

sorts of values that can gain a hearing within this system”.⁹ There is also literature aiming to identify the values underlying a specific subject area, such as the management of Antarctic ship-borne tourism.¹⁰ Furthermore, substantial literature focuses on specific Antarctic values. Extensive attention has been given to the impacts of human activities and infrastructure on both wilderness and aesthetic values.¹¹

The relationship between the different values in the literature is also not well-settled. For instance, according to a study by Jabour, “[t]he evidence provided in [a] preliminary examination of inspection reports supports the suggestion that Parties intentionally prioritise Antarctic values and rank ‘scientific’ value as number one, equally with ‘peace’”.¹² Several authors have put forward different explanations or views as to why “the values of Antarctica that require protection” have not been further developed in relation to specific management issues within the ATS.¹³

Fewer studies appear to have focused on ATS principles. Within those, the relationship between the precautionary principle and tourism received some attention.¹⁴

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- 9 Alan D. Hemmings, “Considerable values in Antarctica”, *The Polar Journal* 2, no. 1 (June 2012): 139, <http://dx.doi.org/10.1080/2154896X.2012.679565>.
 - 10 Sira Engelbertz, Daniela Liggett, and Gary Steel, “Values Underlying the Management of Ship-Borne Tourism in the Antarctic Treaty Area”, *The Polar Journal* 5, no. 2 (2015): 334, <https://doi.org/10.1080/2154896X.2015.1080492>.
 - 11 Rupert Summerson, and Ian D. Bishop, “The Impact of Human Activities on Wilderness and Aesthetic Values in Antarctica”, *Polar Research*, 31, no. 1 (2012): 10858, <https://doi.org/10.3402/polar.v31i1.10858>.
 - 12 Julia Jabour, “The Utility of Official Antarctic Inspections: Symbolism without Sanction?,” in *Exploring Antarctic Values*, ed. Daniela Liggett, and Alan D. Hemmings (Christchurch: Gateway Antarctica Special Publication 2013), 102, available at <https://www.scar.org/library/science-4/social-sciences/hasseg/5392-ssag-proceedings-2011/>.
 - 13 See, for instance, Kees Bastmeijer, and Machiel Lamers, “Reaching Consensus on Antarctic Tourism Regulation: Calibrating the Human-Nature Relationship?,” in *New Issues in Polar Tourism: Communities, Environmental, Politics*, ed. Dieter K. Muller, Linda Lundmark, and Raynald H. Lemelin (Dordrecht: Springer 2012).
 - 14 See, e.g., Kees Bastmeijer, and Ricardo Roura, “Regulating Antarctic Tourism and the Precautionary Principle”, *American Journal of International Law* 98, no. 3 (July 2004): 763–781, and Shirley V. Scott, “How Cautious Is Precautious?: Antarctic Tourism and the Precautionary Principle”, *The International and Comparative Law Quarterly* 50, no. 4 (2001): 963–971, <https://doi.org/10.1093/iclq/50.4.963>. For a discussion on the role of environmental principles in the ATS, see also, Kees Bastmeijer; Rachael Johnstone, “Environmental Protection in the Antarctic and the Arctic: the Role of International Law” in *Research Handbook on International Environmental Law*, ed. Malgosia Fitzmaurice, Marcel Brus, and Panos Merkouris (Cheltenham: Edward Elgar, 2021): 459–498, <https://doi.org/10.4337/9781786439710.00030>.

In light of the above, further clarification is needed concerning the values and principles' status, meaning, inter-relationship, and implications. From the point of view of the development of the ATS, a better understanding of values and principles may contribute to a better grasp of their (potential) role in the governance of Antarctica and to support discussions between policymakers on new governance challenges, such as Antarctic tourism. In addition, this understanding can be of great value to provide more clarity for 'newcomers' in the system and to address possible tensions concerning values and principles. Arguably, these values and principles may be in tension or even clash in terms of required or preferred courses of action concerning different scenarios: "Moral dilemmas arise from situations of an unavoidable choice between incommensurable values".¹⁵

This paper is structured as follows. First, we adopt definitions of the notions of 'value' and 'principle' (Section 2). Without aiming to portray an exhaustive overview of existing literature, we will briefly recall some discussions to illustrate the wide-ranging views on this topic and to support our chosen definitions for the purpose of this contribution. Based on these definitions, the paper proposes a clarification and categorization of the values and principles identified in the Antarctic Treaty and the Environmental Protocol, followed by a discussion of their relationship (Section 3). Conclusions are offered in Section 4.

This paper's scope is limited to identifying and categorizing the values and principles of the Antarctic Treaty and the Environmental Protocol, hereinafter referred to as ATS values and principles. The Convention on the Conservation of Antarctic Marine Living Resources and the Convention for the Conservation of Antarctic Seals have not been examined because they are relatively self-contained, so values and principles may have their own applicability and relevance. Future work may expand the examination beyond the current scope, including these instruments while distinguishing the relevance of values and principles between these different ATS components. Additionally, it would be valuable to analyze values and principles included in or reflected by Decisions, Resolutions, and Measures adopted by the Antarctic Treaty Consultative Meeting (ATCM).

15 Sira Engelbertz, Daniela Liggett, and Gary Steel, "Value Theory for an Antarctic Case Study," in *Exploring Antarctic Values*, ed. Daniela Liggett, and Alan D. Hemmings (Christchurch: Gateway Antarctica Special Publication 2013), 15, available at <https://www.scar.org/library/science-4/social-sciences/hasseg/5392-ssag-proceedings-2011/>.

2 Values and Principles: Definitions

A large body of literature – although not specifically related to the ATS – discusses the meaning and differences between concepts such as ‘ideals’, ‘values’, ‘principles’, ‘rules’, and ‘norms’.¹⁶ While this contribution does not intend to summarize this debate, we examine some definitions of legal values and principles that have been put forward. These examples show the diverse positions taken in the literature but also provide inspiration for adopting definitions that fit well in the context of the ATS and which we will use for the purpose of our analysis.

Sonia Lucarelli has defined principles as “normative propositions that translate values into general ‘constitutional’ standards for policy action”.¹⁷ In turn, values are defined as “notions laden with an absolute (i.e., non-instrumental) positive significance for the overall order and meaning we try to give to our world”.¹⁸ These views appear to be similar to those expressed by Jonathan Verschuuren, although focusing more on the relationship between principles and ‘ideals’. Verschuuren nevertheless seems to consider ideals to be similar to values, defining an ideal as:

a value that is explicit, implicit or latent in the law, or the public and moral culture of a society or group, that usually cannot be fully realised, and that partly transcends contingent, historical formulations, and implementations in terms of rules and principles.¹⁹

Furthermore, Verschuuren states that “[p]rinciples can be seen as the link between ideals and duties, between the morality of aspiration and the morality of duty, between values and rules.”²⁰ In the author’s account, principles are regarded as “a first attempt to make ideals more concrete”.²¹ Moreover,

16 See e.g., the literature discussed in: Jonathan Verschuuren, “Sustainable Development and The Nature of Environmental Legal Principles,” *Potchefstroom Electronic Law Journal* 9, no. 1 (2006), available at: https://www.researchgate.net/publication/318989551_Sustainable_development_and_the_nature_of_environmental_legal_principles.

17 Sonia Lucarelli, “Introduction,” in *Values and Principles in European Union Foreign Policy*, ed. Sonia Lucarelli, and Ian Manners (London: Routledge 2006), 10.

18 Lucarelli, “Introduction,” 10.

19 Verschuuren, “Sustainable Development and The Nature of Environmental Legal Principles,” 235.

20 Verschuuren, “Sustainable Development and The Nature of Environmental Legal Principles,” 221.

21 Verschuuren, “Sustainable Development and The Nature of Environmental Legal Principles,” 223.

Verschuuren affirms the importance of principles, *inter alia*, in providing guidance to self-regulation, asserting that “principles form the basis for self-regulation or otherwise help to determine how private parties should behave in the social order”.²²

Carol Harlow has expressed the view that principles (but not values) constitute an essential part of the legal system when considering the following:

principles contain an ethical dimension, and [...] the legal order and legal principles both contribute to the formation of community morality and take their values from it. Nonetheless, a distinction between ‘principles’, which form an essential building-block of a legal system and ‘values’, which are largely formulated outside that system, is helpful.²³

Other authors question the difference between legal principles and legal values. Jordan Daci has defined a legal principle as a “norm[] of general application that [does] not take into account specific legal facts. By being a kind of basic norms, the legal principles represent the general consensus on basic society understandings. They are a kind of default rules of behavior”.²⁴ Daci has defined legal values as:

some kinds of general, basic and framework norms upon which a legal system is built, the legal values would be nothing more or less than what we have already presented as legal principles. In fact, legal values of a legal system can be identified [sic] also with the main characteristics of a legal system, as such they outline the foundations of a legal system and thus, they are at the same time legal principles.²⁵

For our analysis in this paper, we adopt an approach similar to Lucarelli and Verschuuren. Consequently, we do not share Daci’s view that conflates principles and values, and we do not share Harlow’s view that principles are building blocks of the legal system and that values are largely externally formulated.

22 Verschuuren, “Sustainable Development and The Nature of Environmental Legal Principles,” 222.

23 Carol Harlow, “Global Administrative Law: The Quest for Values and principles,” *EJIL* 17, no. 1 (2006): 187, 190 [internal footnote omitted] <https://doi.org/10.1093/ejil/chi158>.

24 Jordan Daci, “Legal Principles, Legal Values and Legal Norms: Are They the Same or Different?,” *Academicus International Scientific Journal* (2010): 109, 110–111 [internal footnote omitted]. <https://dx.medra.org/10.7336/academicus.2010.02.11>.

25 Daci, “Legal Principles, Legal Values and Legal Norms: Are They the Same or Different?,” 109, 115.

Principles in one particular legal system (e.g., the ATS) are often influenced by other legal systems, while values can also constitute fundamental building blocks of a legal system, particularly as (part of) the objectives of a system. Parties to a treaty system may have their own interpretation of such values, but from the perspective of the system's effectiveness, a common view on the meaning of values, shaped within the system, seems essential. Parties may nevertheless have disparate views concerning different values, which may result in differences concerning the extent to which specific values are developed within the legal system. Accordingly, the following definitions constitute the basis for our further discussions:

Values are important objectives for the legal system. While values have an origin that transcends the legal system, they are further developed within the legal system. The values stated in the instruments of the ATS are a reflection of matters of importance for the members of the international community who created and developed those various instruments and those who have accepted these objectives by becoming a Party to the instruments. As a general rule, values are more general than legal principles.

Principles are fundamental, general legal norms that permeate the legal system and inform specific legal rules. Principles operationalize the legal values of the system, for instance, by guiding more specific rule-making and the interpretation of existing rules. They are general because they do so in a relatively unspecific and abstract manner, to allow them to guide conduct in many different circumstances. For the purpose of this paper, principles are divided into two categories:

- principles that are general legal norms relating to the substance (often of direct relevance for the values) of the legal system (**substantive principles**);
- principles that are general legal norms relating to procedure, organization, and competences (**institutional principles**).

3 Values and Principles in the Antarctic Treaty and the Environmental Protocol

3.1 *ATS Values and Principles: Overview*²⁶

As mentioned earlier, no single provision within the ATS exhaustively lists the values and principles of the system (as such). This section attempts to identify these and to classify them as values or principles (substantive or institutional).

²⁶ The values and principles discussed in this paper follow the authors' definitions put forward in section 2. Individuals that do not agree with those definitions may have different

3.1.1 Values

Values *explicitly* recognized in ATS instruments through the use of the term ‘values’ include: aesthetic, educational, environmental, intrinsic, historic, scientific, and wilderness values.²⁷ Environmental value is explicitly recognized in Article 3.1 of Annex v of the Protocol and expressed in other provisions, for instance, the many provisions that refer to the ‘Antarctic environment and dependent and associated ecosystems’.²⁸ All values, although explicitly recognized as such, are mentioned but not further defined in any of the examined instruments.

In addition, pursuant to the definitions adopted above, the following can also be considered values of the ATS, despite the fact that the term ‘value(s)’ has not been explicitly mentioned: (i) ‘climate and weather patterns’;²⁹ (ii) ‘cooperation’;³⁰ (iii) ‘fauna and flora’;³¹ (iv) ‘human safety’;³² and (v) ‘peace’.³³ We believe these also represent essential objectives of the system, reflecting matters of importance for the ATS and, accordingly, fall within our definition of values.

We acknowledge that there might be substantial overlap amongst the different values identified. Likewise, we believe it is crucial to exemplify the extant overlap among many of the identified values to underscore their complexity.

For example, while it could be argued that ‘wilderness values’, ‘fauna and flora’, and ‘climate and weather patterns’ might be encompassed within ‘environmental value’, we have decided to consider them separately. In our view, it would be reductionist of their substance to merely regard them as part of ‘environmental value’ insofar as they can be seen to have distinctive characteristics that deserve separate consideration. As such, ‘fauna and flora’ is a value

interpretations and understanding of the values and principles analyzed. Additionally, the documents were examined only in terms of their written scope. Thus, the analysis does not include values and principles that might be considered in practice though not documented in the Treaty or the Protocol.

27 See, for instance, Article 2, Article 3(1), and Article 6(1)(a) Protocol and Articles 3, 4, and 8 of Annex v to the Protocol.

28 See Articles 2, 3(1) Protocol.

29 See Article 3(2)(b)(iv) Protocol.

30 See Preamble Treaty: “[...] Convinced that the establishment of a firm foundation for the continuation and development of such cooperation on the basis of freedom of scientific investigation in Antarctica as applied during the International Geophysical Year accords with the interests of science and the progress of all mankind; [...]”.

31 See Article 3(2)(b)(i) Protocol.

32 See Article 7(1) Annex I, Article 2(1) Annex II, Article 12(1) Annex III, Article 7(1) Annex IV, Article 11(1) Annex v Protocol.

33 See Article 2 Protocol.

that refers to specific species of vegetation and animals (including sub-species and genetic variability within species) that receive special or heightened protection in comparison with other species. This protection can be observed in the provisions of Annex II of the Protocol on the protection of fauna and flora: a series of requirements and prohibitions are laid out concerning the species falling within the Annex's scope, proceeding well beyond protection or value attached to other species (such as fish and krill that can be fished and commercially exploited), differentiating its scope from 'environmental value'. 'Fauna and flora', thus, pursue a restrictive meaning that excludes certain species from this heightened protection or value. 'Wilderness values' refer to values connected to certain regions or sites in Antarctica or to specific characteristics of Antarctica, such as naturalness, the absence of human-made infrastructure and artifacts, and large size,³⁴ hence not fully encompassed within 'environmental value'. Similarly, the 'climate and weather patterns' value refers to the truly universal relevance and impact of Antarctica over the climate and weather patterns of the Earth. In our understanding, this global impact is also not entirely encapsulated within the 'environmental value' (also 'Antarctic environment and dependent and associated ecosystems'). Nonetheless, we acknowledge that different views on this distinction are possible depending on one's definition of 'dependent and associated ecosystems' in light of ecosystems' interconnectedness.

3.1.2 Substantive Principles

The Antarctic Treaty consecrated two fundamental substantive principles: the dedication of Antarctica for peaceful purposes only (Article I Treaty) and freedom of scientific investigation and cooperation toward that end (Article II Treaty). Consultative Parties have, on repeated occasions, reiterated the importance of the latter as "a cornerstone of the Treaty".³⁵ The so-called "agree-

34 For definitions of wilderness in relation to Antarctica, see Rachel I. Leihy et al., "Antarctica's Wilderness Fails to Capture Continent's Biodiversity," *Nature* (July 2020): 567–571, available at <https://www.nature.com/articles/s41586-020-2506-3>. For discussions on definitions of wilderness more generally as well as ecological, social and economic values of wilderness, see Kees Bastmeijer, ed., *Wilderness Protection in Europe. The Role of International, European and National Law* (Cambridge: Cambridge University Press, 2016). For discussions on the challenge to protect wilderness in the ATS, see Kees Bastmeijer, and Tina Tin, "Antarctica – A Wilderness Continent for Science: The 'Public's Dream' as a Mission Impossible?", in *The Yearbook of Polar Law*, ed. Gudmundur Alfredsson, Timo Koivurova (eds in chief) and Hjalti Ómar Ágústsson (special ed. Volume 5) (Boston:Leiden: Brill/Martinus Nijhoff Publishers, 2014), 559–597, https://doi.org/10.1163/1876-8814_020.

35 Washington Ministerial Declaration on the Fiftieth Anniversary of the Antarctic Treaty, Appendix 1 to the Final Report of the Thirtieth (30th) ATCM, Baltimore, USA,

ment to disagree” on territorial claims over Antarctica (Article IV Treaty) is undoubtedly another cornerstone of the ATS and contains a substantive component. However, we categorized this principle as institutional (see below).

The Protocol’s objective declares that “The Parties commit themselves to *the comprehensive protection of the Antarctic environment and dependent and associated ecosystems and hereby designate Antarctica as a natural reserve, devoted to peace and science*” (Article 2 Protocol, emphasis added). This objective and designation reflect that comprehensive environmental protection is the “third pillar”³⁶ of the ATS and, thus, can be seen to unite three fundamental substantive principles: ‘use for peaceful purposes only’, ‘freedom of scientific research and international cooperation to that end’, and ‘comprehensive environmental protection’.³⁷

Several substantive principles are recognized in Article 3 of the Protocol. Article 3(1) requires Parties to ensure that

[t]he protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area.

Similarly, Article 3(2)(a) sets out an obligation whereby “activities in the Antarctic Treaty area shall be planned and conducted so as to limit adverse impacts on the Antarctic environment and dependent and associated ecosystems”. Article 3(2)(b) contains a list that enumerates some more specific impacts and effects that shall be avoided when planning and conducting activities in the area. Therefore, these provisions can be seen to reflect the preventive or prevention principle, which is considered “an anticipatory principle that seeks to avoid foreseeable risks”.³⁸

The precautionary approach is another substantive principle of the system. Although not explicitly mentioned as such in the ATS hard law instruments, its

6–17 April 2009, Volume 1 (Secretariat of the Antarctic Treaty).

36 Kees Bastmeijer, *The Antarctic Environmental Protocol and its Domestic Implementation* (Leiden: Kluwer Law International, 2003) 12, 51.

37 See Olav Schram Stokke, and Davor Vidas, “Introduction,” in *Governing the Antarctic: The Effectiveness and Legitimacy of the Antarctic Treaty System*, ed. Olav Schram Stokke, and Davor Vidas (Cambridge; New York: Cambridge University Press, 1996).

38 Leslie-Anne Duvic-Paoli, *The Prevention Principle in International Environmental Law* (Cambridge; New York: Cambridge University Press 2018), 8.

essence is reflected in Article 3 of the Protocol. For instance, Article 3(2)(c) of the Protocol states as follows:

activities in the Antarctic Treaty area shall be planned and conducted on the basis of information sufficient to allow prior assessments of, and informed judgements about, their possible impacts on the Antarctic environment and dependent and associated ecosystems and on the value of Antarctica for the conduct of scientific research.

This provision concerns the sufficiency of the information to make decisions regarding the planning and development of activities in the Antarctic area. Article 3(4)(b) of the Protocol stipulates that activities “shall [...] be *modified, suspended or cancelled if they result in or threaten to result* in impacts upon the Antarctic environment or dependent or associated ecosystems inconsistent with those principles” (emphasis added). The threat of an activity resulting in impacts on the Antarctic environment is sufficient to warrant the activity’s modification, suspension, or cancellation. Therefore, this provision relates to approaches that shall be taken in situations addressing the (in)sufficiency of information. In light of these provisions, we consider that Article 3 of the Protocol implicitly reflects the precautionary approach.³⁹

Furthermore, pursuant to Article 3(3) of the Protocol, “Activities shall be planned and conducted in the Antarctic Treaty area so as to *accord priority to scientific research and to preserve the value of Antarctica as an area for the conduct of such research*” (emphasis added). Thus, the ‘priority of science’ is a further substantive principle that shall guide the planning and conduct of activities in the Antarctic Treaty area.

‘Ensuring human safety’ can also be seen as another substantive principle of the ATS. The capacity to respond promptly and effectively to accidents is one of the considerations that shall be taken into account in the planning and conduct of activities in the Antarctic Treaty area pursuant to Article 3(2)(c)(vi) of the Protocol. Moreover, all the Annexes of the Protocol contain exceptions in case of emergencies relating to the safety of human life or ships, aircraft or equipment, and facilities of high value.⁴⁰

39 We consider the precautionary principle or approach as a substantive *principle* within the ATS, in accordance with the definitions put forward in the previous section. Nevertheless, we acknowledge that this classification (as a principle) is contested by at least one Consultative Party.

40 Article 7 of Annex I, Article 2 of Annex II, Article 12 of Annex III, Article 7 of Annex IV and Article 11 of Annex V.

Finally, the Treaty's Preamble proclaims "that it is *in the interest of all mankind* that Antarctica shall continue for ever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord" (emphasis added). Likewise, the Protocol's Preamble affirms the Parties' conviction "that the development of a comprehensive regime for the protection of the Antarctic environment and dependent and associated ecosystems is *in the interest of mankind as a whole*" (emphasis added). Thus, the interest of all humankind appears as a crucial consideration in the Parties' governance endeavors. On this basis, the 'governance in the interest of all humankind'⁴¹ can further be considered another substantive principle of the ATS.

3.1.3 Institutional Principles

In order to achieve the purposes of the ATS, the Treaty embraces several institutional principles (including procedural principles) that define the system's workings.

Fundamental is the "agreement to disagree" on territorial claims over Antarctica (Article IV), which preserves the Parties' respective positions regarding these claims and their legitimacy and legality while precluding new claims and the expansion of existing ones. This provision, sometimes referred to as a "modus vivendi",⁴² upholds the Parties' respective positions on this delicate issue and allows them to operate and cooperate in Antarctica without prejudice to the former. Therefore, 'agreement to disagree on the legitimacy and legality of territorial claims, preclusion of new claims and expansion of existing claims' can be seen as an institutional principle critical to the ATS's political acceptability and stability. However, this principle also contains substantive components as it relates to the legitimacy of claims and the legal status of Antarctica.

Directly related to the 'agreement to disagree' and therefore also fundamental is the form of decision-making adopted by the ATCM and CEP, which ensures the broadest possible support for decisions while guaranteeing that no Consultative Party will be bound if it has objections (Article IX(4) of the Treaty

41 While the Preambles to the Treaty and the Protocol refers to "mankind", we have decided to refer to "humankind" in our formulation of this substantive principle. In our view, this reformulation is a reflection of more inclusive language that is more appropriate for current times without implying a departure from the intended meaning of these instruments.

42 See Yelena Yermakova, "Legitimacy of the Antarctic Treaty System: Is It Time for a Reform?," *The Polar Journal* 11, no. 2 (2011): 342, 347–348, <https://doi.org/10.1080/2154896X.2021.1977048>. See also, John Hanessian, "The Antarctic Treaty 1959," *International and Comparative Law Quarterly* 9, no. 3 (July 1960): 436–480.

and Rules of Procedures of the CEP and ATCM). Hereinafter, this is referred to as the principle of ‘consensus-based decision-making’.

Another crucial institutional principle is ‘joint governance/responsibility over activities in Antarctica’ to ensure that all activities are planned and conducted in compliance with the Antarctic Treaty and Protocol provisions. This principle can be ascertained in Article x of the Treaty and Article 13 of the Protocol and can be regarded as a logical and necessary corollary from the ‘agreement to disagree’.

Likewise, the ‘integrated and mutually supportive nature of various ATS instruments’ is another institutional principle that guides the Parties’ engagement with the system. We borrowed the specific wording from the Washington Declaration.⁴³ Article 4 of the Protocol reflects (part of) the substance of this principle: Article 4(1) defines the Protocol’s relationship with the Antarctic Treaty, stating its supplementary character, and Article 4(2) determines that “nothing in this Protocol shall derogate from the rights and obligations of the Parties to this Protocol under the other international instruments in force within the Antarctic Treaty system”.

‘Scientific interest as a ‘ticket to the table’ or the system’s “dominant currency”⁴⁴ can be considered a further institutional principle insofar as new Contracting Parties that accede to the Treaty (other than the original 12 signatory States) must demonstrate substantial scientific research activity in Antarctica in order to achieve consultative status and, therefore, to attain the right to participate in decision-making at ATCMs (Article IX (2) Treaty).⁴⁵

The ‘inspection system’ (Article VII Treaty and Article 14 Protocol) is another institutional principle that promotes transparency, trust, observance, and compliance with the provisions of the Treaty. Moreover, Article 3(2)(c) of the Protocol establishes ‘environmental impact assessment (EIA)’ as an institutional principle that is operationalized further in Article 8 and Annex I of the

43 See Washington Ministerial Declaration on the Fiftieth Anniversary of the Antarctic Treaty, Appendix 1 to the Final Report of the Thirtieth (30th) ATCM, Baltimore, USA, 6–17 April 2009, Volume 1 (Secretariat of the Antarctic Treaty): “*Recognizing the integrated and mutually supportive nature of the Antarctic Treaty system, encompassing, inter alia, the Protocol on Environmental Protection to the Antarctic Treaty, the Convention on the Conservation of Antarctic Marine Living Resources and the Convention for the Conservation of Antarctic Seals, and the central role of the Treaty within that system*” (emphasis added).

44 See Peder Roberts, “Does the Science Criterion Rest on Thin Ice?,” *The Geographical Journal* (2020): 1, DOI:10.1111/geoj.12367.

45 See footnote 6.

Protocol. Similar to some other institutional principles, this principle also has substantive components. However, as the EIA instrument mainly aims to support decision-making on human activities in Antarctica, we consider it primarily ‘institutional’, categorizing it as such for the purpose of this paper.

Finally, it is also relevant to mention as a further institutional principle the “exchange of information to promote international cooperation” (Article III Treaty) and the “annual circulation and exchange of information by the Parties on the Protocol’s implementation” (Article 17 Protocol). We will refer to these hereinafter as ‘exchange of information and international cooperation’.

3.1.4 Overview

An overview of the ATS values and principles identified above is provided in Table 11.1. This table includes the most relevant provisions referring to the values and principles discussed, however not aimed at portraying an exhaustive compilation of all the instances where such values and principles are mentioned or reflected. Furthermore, as explained in the introduction, this inventory does not intend to establish a complete ATS inventory of values and principles, as different values and principles may be included in other ATS Decisions, Resolutions, and Measures.

TABLE 11.1 Overview of the values and principles in the Antarctic Treaty and the Environmental Protocol

Values	Aesthetic values	Article 3(1) Protocol Article 3(2) Annex III Protocol Article 3 Annex v Protocol
	Environmental value – Antarctic environment & dependent and associated ecosystems	Preamble, Article 2, and Article 3(1) Protocol Article 3(1) Annex v Protocol
	Climate and weather patterns	Article 3(2)(b)(i) Protocol
	Cooperation	Preamble Treaty
	Educational values	Article 6(1)(a) Protocol
	Fauna and flora	Article 3(2)(b)(iv) Protocol Annex II to the Protocol on the Conservation of Antarctic Fauna and Flora

TABLE 11.1 Overview of the values and principles in the Antarctic Treaty (*cont.*)

	Historic values	Article 3(2)(b)(vi) Protocol Article 1 and Article 3(2) Annex III Protocol Article 3, Article 4, Article 8, Article 9 and Article 10 of Annex v Protocol
	Human safety	Article 7(1) Annex I Protocol Article 2(1) Annex II Protocol Article 12(1) Annex III Protocol Article 7(1) Annex IV Protocol Article 11(1) Annex v Protocol
	Intrinsic value	Article 3(1) Protocol
	Peace	Article 2 Protocol
	Scientific value	Preamble Treaty, Preamble Protocol, Article 3(1), Article 3(2)(c) and Article 3(3) Protocol, Article 3(2) Annex III Protocol, Article 3 Annex v Protocol
	Wilderness values	Article 3(1), Article 3(2)(b)(vi) Protocol, Article 3(2) Annex III, Article 3 Annex v Protocol
Substantive principles	Comprehensive environmental protection	Article 2 Protocol
	Ensuring human safety	Article 3(2)(c)(vi) Protocol, Article 7(2) Annex I, Article 2(2) Annex II, Article 12(2) Annex III, Article 7(2) Annex IV, Article 11(2) Annex v Protocol
	Freedom of scientific research and international cooperation to that end	Article 11 Treaty

TABLE 11.1 Overview of the values and principles in the Antarctic Treaty (*cont.*)

	Governance in the interest of all humankind	Preamble Treaty Article IV Treaty Preamble Protocol
	Precautionary approach	Article 3 Protocol
	Prevention principle	Article 3(2)(a) and (b) Protocol
	Priority of science	Article 3(3) Protocol
	Use for peaceful purposes only	Preamble Treaty Article I Treaty
Institutional principles	Agreement to disagree on the legitimacy and legality of territorial claims, preclusion of new claims and expansion of existing claims	Preamble Treaty Article I Treaty Article IV Treaty
	Consensus-based decision-making	Article IX(4) Treaty
	Environmental Impact Assessment (EIA)	Article 3(3)(c) Protocol (further elaborated in Article 8 and in Annex I Protocol)
	Exchange of information and international cooperation	Article III Treaty Article 6 and Article 17 Protocol
	Inspection system	Article VII Treaty Article 14 Protocol
	Integrated and mutually supportive nature of various ATS instruments	Article 4 Protocol
	Joint governance/responsibility over activities in Antarctica	Article X Treaty and Article 13 Protocol
	Scientific interest as a 'ticket to the table'	Article IX(2) Treaty

3.2 *ATS Values and Principles: Categorization*

To further explore the status and inter-relationship of the above-mentioned values and principles, Figure 11.1 provides a categorization.

After a closer look at the identified values and principles, we conducted a category construction based on their characteristics and distinctions. An umbrella term forms each category, and the values and principles within each category directly relate to this term. Five categories emerged from the pattern recognition exercise: “Peace”, “Science”, “Environment”, “Cooperation”, and “Other Human Interests”. The last category, “Other Human Interests”, includes values and principles that did not fit the previous categories, although the strong anthropocentric character still connects them. Nevertheless, it is important to elucidate that we consider that *all* other ATS values and principles, being in the categories of “Peace”, “Science”, “Environment”, and “Cooperation”, can be seen as values and principles that at least in part also relate to human interest.⁴⁶ Thus, human interest is not exclusive to the last category.

The figure also exhibits a hierarchical categorization. By our definition, “principles operationalize the legal values of the system”. Thus, arrows connect principles to the values we consider they intend to operationalize.

Given the overview and categorization of the ATS values and principles portrayed above, we will discuss the possible relationship between values and principles and their categories in this section. In some cases, the same term is used to refer to values and to categories. In order to avoid confusion, we will use inverted commas to refer to the categories, while values and principles will be in italics and without inverted commas throughout this section. We will first look at each category separately and then at the relationship between all categories.

3.2.1 Category: Science

The category “Science” depicts a relatively straightforward configuration – it is comprised of a value related to at least two substantive principles and one

46 Some authors, however, consider that *intrinsic value* reflects “the perspective that nature has value in its own right, independent of human uses. Intrinsic value opens us to the possibility that nature has value even if it does not directly or indirectly benefit humans.” Anne W. Rea, and Wayne R. Munns Jr., “The Value of Nature: Economic, Intrinsic, or Both?,” *Integrated Environmental Assessment and Management* 13, no. 5 (2017): 953, <https://doi.org/10.1002/ieam.1924>. For a more complete discussion on the topic, see also Marc D. Davidson, “On the Relation Between Ecosystem Services, Intrinsic Value, and Economic Valuation,” *Ecological Economics* 95 (2013): 171, <https://doi.org/10.1016/j.ecolecon.2013.09.002>.

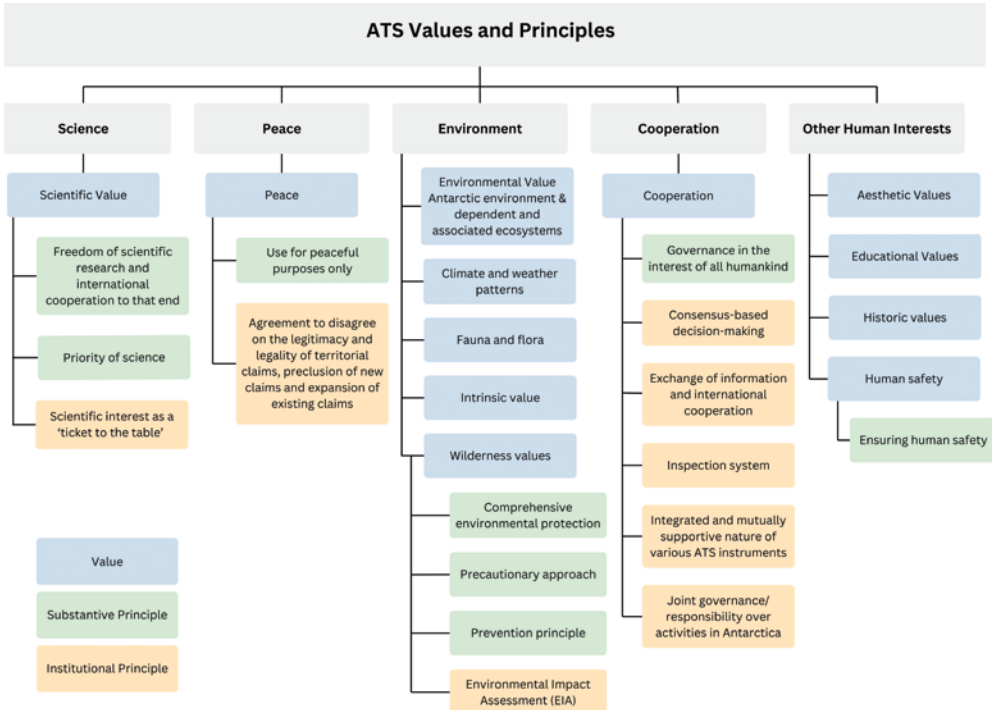


FIGURE 11.1 Categorization: ATS values and principles

institutional principle. In our view, all the principles in this category contribute to operationalizing *science* (and scientific knowledge as an outcome of science) as a value. Moreover, they assist in illustrating the high status accorded to science within the ATS.

Freedom of scientific research and international cooperation to that end is an essential feature of human engagement with Antarctica. Likewise, the *priority of science* is also a guiding principle in the planning and conduct of all activities in the Antarctic Treaty area. Both of these principles are general legal norms directly related to the value of science, with the consequence that science is afforded not only a certain level of autonomy but also precedence over all other activities. At the same time, scientific research is crucial for Parties to achieve Consultative status and, thus, have decision-making capacity under the Treaty.

Even though we acknowledge that science is a human value, in the sense that solely humans perform it, we consider “Science” a distinct category due to its central significance in the System. Furthermore, the results of science can be useful not only to humans but can also be used as a basis for decision-making,

for instance, or for implementing best practices to benefit other values, such as environmental or cooperation values.

3.2.2 Category: Peace

The category “Peace” follows a similar configuration to the last category. In this case, the value *peace* is operationalized by one substantive principle and one institutional principle. *Peace*, as a value, can only be achieved if Antarctica is used for peaceful purposes. As such, the connection and importance of this value to the substantive principle of *use for peaceful purposes only* is undeniable.

As mentioned before, the institutional principle ‘*agreement to disagree*’ is an expression of a “modus vivendi” within the ATS.⁴⁷ By preserving the Consultative Parties’ respective positions on the contested matter of territorial claims, this institutional principle supports the stable operation of the ATS. We also recognize that this principle could be placed in the “Cooperation” category. However, in our view, this principle is essential in avoiding potential disputes and enabling the value of *peace* in Antarctica.

3.2.3 Category: Environment

The category “Environment” portrays a very different configuration than the two previous categories. Five values in this category show the broad range of significant elements related to the environment. This range can also be seen to reflect the complex and comprehensive nature of the environment in Antarctica.

Three substantive principles are related to the environment. In our view, they are all relevant to all the identified values. Firstly, *comprehensive environmental protection* does, by definition, relate to all the environmental components and aims to achieve sound and holistic protection thereof. The two remaining substantive principles, *precautionary approach* and *prevention principle*, are cornerstone principles within environmental law. These principles relate to the protection of the environment in different forms, depending on the level of available information on potential risks and impacts.

Finally, *environmental impact assessment (EIA)* is the only institutional principle identified within this category. This principle is also instrumental in achieving the substantive principles and, therefore, the values compromised in this category.

47 See Yermakova, “Legitimacy of the Antarctic Treaty System: Is It Time for a Reform?,” 342, 347–348, and John Hanessian, “The Antarctic Treaty 1959,” 436–480.

3.2.4 Category: Cooperation

The category “Cooperation” contains the value of *cooperation*, one substantive principle, and five institutional principles.

Whereas *governance in the interest of all humankind* is the only substantive principle within this category, the large number of institutional principles cover various essential features of the System’s structure. For instance, the *joint governance/responsibility over activities in Antarctica* is one of this category’s most general institutional principles. This principle introduces the procedural aspect of the above-mentioned substantive principle and informs the extent of the Parties’ competencies in their governance endeavors in Antarctica. *Exchange of information and international cooperation to that end* is one of the primary characteristics of the ATS’ governance structure. Moreover, the *integrated and mutually supportive nature of various ATS instruments* is a principle that defines the institutional configuration and features of the ATS. Finally, the *inspection system* and the *consensus-based decision-making* are more specific or concrete instances of the cooperation value within the system.

3.2.5 Category: Other Human Interests

When examining the “Other Human Interests” category, the configuration is once again less straightforward. In our view, four values are included in this category: *aesthetic*, *educational*, *historic*, and *human safety*. While acknowledging that values in all categories can, to a certain extent, be regarded as human values, as mentioned before, we believe these values merit separate consideration as their anthropocentric component is particularly evident. *Aesthetic values* relate to the experience of landscape and environment by humans; *educational values* refer to the enrichment and learning by humans; *historic values* relate to the value attributed to past human presence in Antarctica; and *human safety* concerns predominantly figure as a consideration throughout the ATS.

Despite the diversity of these values, we have only found one (*ensuring human safety*) substantive principle related to this category articulated in the Treaty and the Protocol. Moreover, we believe the *ensuring human safety* principle refers exclusively to the operationalization of the *human safety* value. We have not been able to identify a more specific articulation of other principles in the documents analyzed.

3.2.6 All Categories

According to our definition, principles aim to operationalize the values of the system. In this way, they contribute to their function, protection and/or achievement. This is evident, for example, when considering the substantive principles in “Science” – *freedom of scientific research and international cooperation*

to that end and the *priority of science*. By committing to the freedom of scientific research and granting priority to science, the ATS operationalizes *science* and, thus, contributes to science being executed. The same can be seen with the substantive principle in “Peace” – *use for peaceful purposes only*. By limiting the use of the Antarctic Treaty area for peaceful purposes only, the ATS operationalizes the achievement of *peace*.

Thus, in our view, categories with a clearer configuration (value(s), substantive principle(s), and institutional principle(s)) may also deliver a clearer understanding and, thereby, better protection of the values inserted in those categories. In this configuration, a value is complemented by at least one principle considering its substance and one principle considering its procedure, and, as such, the operationalization of the value is rather evident. In this regard, the values of *science* or *peace* in Antarctica are not often disputed at the ATCMS or in the literature. It is taken for granted that they are fundamental to the ATS, and the way in which they are operationalized is relatively straightforward.

On the other hand, in the categories where this configuration is not so straightforward (“Environment”, “Cooperation”, and “Other Human Interests”), ambiguity may arise as to how to operationalize the associated values. In the category “Environment”, for example, the EIA is the only principle related to procedure. Thus, the operationalization of the values within the category generally requires further specific norm-making through the adoption of hard or soft law in the System. To a certain extent, this has been done by adopting more specific substantive norms in the Protocol itself, as well as in Resolutions and Measures. However, as is illustrated by the intensive tourism debate at the ATCMS, for example, it is clear that the existing complex of norms does not address all developments that exert pressure on the identified environmental values.

Meanwhile, in the case of the category “Other Human Interests”, three values have neither a substantive nor an institutional principle. Without more specific guidance, these values are more difficult to be ingrained and considered within everyday decision-making. Nevertheless, it is worth noting that more specific guidance or norm-setting has been established for some of these values. An example relates to the guidance for the designation of Historic Sites and Monuments.⁴⁸

48 Resolution 2 (2018), Guidelines for the assessment and management of heritage in Antarctica.

4 Conclusion and Potential Implications

The primary purpose of this paper was to provide an overview of ATS values and principles and to propose a categorization. The above discussion shows that values and principles may be found in many different provisions of the Antarctic Treaty and its Environmental Protocol. However, comprehensive guidance related to the ATS values and principles is still lacking.

The risk of the widespread distribution of values and principles in the Treaty and Protocol is that the attention to these values and principles – when discussing policy concerns and devising governance responses (e.g., rule-making) – becomes somewhat arbitrary. More clarity about the values and principles and their interdependence can reduce this arbitrariness. With this paper, the authors hope to contribute to broadening the understanding and clarification of the ATS values and principles and to encourage further examinations on the topic. In this context, it should be emphasized that the values and principles identified should be considered underpinning values and principles, as additional ones may be recognized in, for example, Decisions, Resolutions, and Measures.

Moreover, several substantive principles already possess a particular normative function for guiding the planning and conduct of human activities in Antarctica. Yet, the relatively general character of these principles requires further elaboration into guidelines and rules to firmly protect the identified Antarctic values. For developing such guidelines and rules, not only these substantive principles are essential but also institutional principles.

As Verschuuren highlights, principles influence the development and application of concrete rules and also affect policies. Further, the author states that “policies may be changed overnight; principles, however, are embedded in the legal culture and, although their precise content may vary from time to time, principles remain relevant for a long period of time”.⁴⁹ We consider that, due to their embeddedness in the system and relatively abstract character, principles are relevant for the ability of the ATS to evolve and adapt, including in response to current and future activities.⁵⁰ This is particularly important from

49 Verschuuren, “Sustainable Development and The Nature of Environmental Legal Principles,” 241.

50 See Paris Declaration 2021: “[...] Underscoring the ability of the Antarctic Treaty system to evolve and adapt, including in response to current and future tourism and non-governmental activities, the incorporation of new Parties in the Antarctic Treaty, and the installation of new stations, Recognising the cumulative effect of the Antarctic Treaty system instruments to that end, in particular of the Antarctic Treaty, as well as the Convention

the perspective of the role of principles in the System to guide norm-setting to protect the values of the ATS, also in changing circumstances.

More concretely, a more structural understanding of and attention to the values and principles can be of great importance in further shaping Antarctic governance and developing new regulatory instruments. Examples include making policy choices concerning human activity in Antarctica. A good overview of the values and principles can help highlight the main concerns of the significant growth and diversification of tourism since the entering into force of the Protocol 25 years ago, for example. In addition, the values and principles can constitute the fundament for developing instruments and policies, such as spatial plans or pre-assessment tools for (new) activities. In a broader sense, structural attention to the values and principles can also prevent specific values from being entirely ignored in environmental impact assessments, as often seems to be the case with wilderness values, for instance. The values and principles are also of great importance when Parties consider designating new Antarctic Treaty Specially Protected and Managed areas (ASPAS and ASMAS) and when updating Management Plans for existing ASPAS. Moreover, consideration of all values and principles is crucial to developing a consistent climate adaptation policy in Antarctica.

Further research may look into other instruments, such as ATS Measures and Resolutions adopted, to understand if and how the ATS considers values and principles beyond the scope of the Treaty and the Protocol.

for the Conservation of Antarctic Seals, 1972, the Convention on the Conservation of Antarctic Marine Living Resources, 1980, and the Environmental Protocol, [...]"